

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF VIRGINIA  
HARRISONBURG DIVISION

TIPPMANN ENGINEERING, LLC,

Plaintiff,

v.

INNOVATIVE REFRIGERATION SYSTEMS,  
INC. & MICHAEL J. MCGINNIS, JR.,

Defendants.

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) Civil Action No. 5:19cv00087  
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) By: Michael F. Urbanski  
) Chief U.S. District Judge  
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**MEMORANDUM OPINION**

Plaintiff Tippmann Engineering, LLC, (“Tippmann”), brings this action against defendants Innovative Refrigeration Systems, Inc., and Michael J. McGinnis, Jr., (collectively, “Innovative”), alleging infringement of U.S. Patent No. 9,297,570. This matter is before the court for claim construction pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996). The issues have been briefed and argued and are ripe for adjudication.

**I.**

Tippmann is the owner of the U.S. Patent No. 9,297,570 (the ‘570 Patent), entitled “Rack-Aisle Freezing System for Palletized Product,” which was issued by the United States Patent and Trademark Office on March 29, 2016. The ‘570 Patent claims an installation for blast freezing and warehousing pallets of bulk foods. The ‘570 Patent was the continuation of an earlier patent application filed by Tippmann, which resulted in the issuance on July 22, 2014, of U.S. Patent No. 8,783,047 (the ‘047 Patent), also entitled “Rack-Aisle Freezing System for Palletized Product.” The two patents are closely related. The abstracts of the two patents are identical. Both patents contain ten identical figures displayed on ten drawing sheets. The specifications of the two patents, set forth in columns 1 through 4, track each other, word for word. Importantly, the abstract and specification of both the ‘047 and

'570 Patents contain significant limitations made by Tippman during the prosecution of the parent '047 Patent. First, both abstracts state that palletized product is quickly frozen when ambient air is chilled by a chiller located in the interior of a cold storage warehouse space. Second, both abstracts call for the ambient freezing air to be drawn through the palletized product. Third, the specifications of both patents distinguish the disclosed invention from a two-stage freezer warehouse. The identical specification in each patent states:

Unlike two-stage freezer warehouses, this disclosure describes a specially configured rack system that assists freezing the product directly in the open warehouse space. In essence, the system described herein is a one-stage freezing storage system, rather than a multi-stage storage system.

'570 and '047 Patents, Col. 1, lines 37–42.

While the abstract, figures and specifications of the '047 and '570 Patents are the same, the claims of the '570 Patent and '047 Patent are different. For instance, the '047 Patent has both installation and method claims, while the '570 Patent only has installation claims. Despite the identical nature of the abstract, drawing sheets and specifications of the two patents, differences in the claims of the two patents cause Tippmann to assert that the '047 Patent and '570 Patent claim different inventions, as follows: “The claims in the '570 Patent—the continuation of the '047 Patent—claim an entirely different invention than is claimed by the '047 Patent (although both inventions are disclosed in the shared specification).” Tippmann’s Reply Claim Construction Brief, ECF No. 113, at 7.

As made clear at oral argument on the claim construction issues, there are two central issues in this case. First, while the '047 Patent, and the abstract and specifications of the '570 Patent, describe an installation providing for freezing and storage of food items in one stage, Tippmann asserts that the claims of the '570 Patent are broad enough to encompass a two-stage warehouse, where food is frozen in one place and stored in another. Second, while Tippmann asserts that the claims of the '570 Patent cover both a positive and negative air pressure system, Innovative points out that Tippmann

expressly disclaimed a positive pressure system in the '047 Patent examination process due to the examiner's rejection of the application because of prior art employing positive pressure. As Tippmann noted at oral argument, if the '570 Patent was limited to a negative pressure system, "that would end our case." Markman Hr'g Tr., ECF No. 131, at 58.

## II.

The first step in a patent infringement case is to construe the meaning and scope of the patent claims at issue. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). Claim construction is a matter of law exclusively for the court. Id. at 977–79; see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1360 (Fed. Cir. 2008) ("When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute." (citing Markman, 52 F.3d at 979)).

"To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history." Markman, 52 F.3d at 979 (quoting Unique Concepts, Inc. v. Brown, 939 F.2d 1558, 1561 (Fed. Cir. 1991)). "Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." Vitronics Corp. v. Conceptron, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996).

First, the court must look to the words of the claims themselves. The claim terms "are generally given their ordinary and customary meaning," that is, "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips v. AWH Corp., 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (citations omitted). "The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation." Id. at 1313 (citing Innova/PureWater, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)). "In some cases, the ordinary meaning of claim language as understood by a person of skill in

the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314 (citing *Brown v. 3M*, 365 F.3d 1349, 1352 (Fed. Cir. 2001)).

The claims, however, do not stand alone and must be read “in view of the specification, of which they are a part.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). A person of ordinary skill in the art “is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* at 1313. “[I]t is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Vitronics Corp.*, 90 F.3d at 1582 (citing *Markman*, 52 F.3d at 979). “[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Thus, the specification is “always highly relevant” to the analysis. *Vitronics Corp.*, 90 F.3d at 1582. “Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.*

Additionally, the court must consider the prosecution history, which contains “the complete record of all the proceedings before the Patent and Trademark Office [(“PTO”)], including any express representations made by the applicant regarding the scope of the claims,” *id.*, as well as “the prior art cited during the examination of the patent,” *Phillips*, 415 F.3d at 1317 (citing *Autogiro Co. of Am. v. United States*, 181 Ct. Cl. 55, 384 F.2d 391, 399 (1967)). “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317 (citing *Lemelson v. Gen Mills, Inc.*, 968 F.2d 1202, 1206 (Fed. Cir. 1992)).

The claims, specification and prosecution history “constitute the public record of the

patentee's claim," and, generally, "an analysis of th[is] intrinsic evidence alone will resolve any ambiguity in a disputed claim term." Vitronics Corp., 90 F.3d at 1583. However, the court may, in its discretion, look to extrinsic evidence, "including expert and inventor testimony, dictionaries, and learned treatises," Phillips, 415 F.3d at 1317 (quoting Markman, 52 F.3d at 980), in order "'to aid the court in coming to a correct conclusion' as to the 'true meaning of the language employed' in the patent." Markman, 52 F.3d at 980 (quoting Seymour v. Osborne, 78 U.S. 516, 546 (1871)). Although it is "less significant than the intrinsic record in determining the legally operative meaning of claim language," Phillips, 415 F.3d at 1317 (citations omitted), extrinsic evidence "may be helpful to explain scientific principles, the meaning of technical terms, and terms of art that appear in the patent and prosecution history." Markman, 52 F.3d at 980. "Extrinsic evidence is to be used for the court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims." Id. at 981. It "is not for the purpose of clarifying ambiguity in claim terminology." Id. at 986.

After outlining the prosecution history of these two patents, the court will address the central issues raised in this case in the context of providing construction of the disputed terms.

### III.

#### A. Prosecution History of '047 Patent.

Tippmann filed a non-provisional patent application (the "'047 Application") on September 8, 2010, entitled Rack-Aisle Freezing System for Palletized Product. See '047 Application, ECF No. 112-5. The application included ten figures and an original set of twenty claims. Id. at 6–9 & Figs. 1–10. Claims 1, 5, 11, and 18–19 are independent claims. Id. at 6–9.

##### 1. The Examiner Rejects the '047 Application in its Entirety as Anticipated and Obvious over Prior Art.

In a Non-Final Office Action dated November 20, 2012, the Examiner rejected all of claims 1–20 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over U.S. Patent No. 6,446,452 to Durham ("Durham"). See Non-Final Office Action dated

November 30, 2012, ECF No. 112-6, at 4. Claims 1–2, 5–7, and 11–20 were additionally rejected under § 102(b) as obvious over U.S. Published Application No. 2008/0178616 to Klysen (“Klysen”). See id. at 5. The Examiner found that Klysen and Durham “disclose[d] the invention substantially as claimed.” Id. at 5, 11.

2. Tippmann’s Arguments Distinguishing Warehouse Space, Air Flow, Chiller Location, and “Sealing Engagement” of ’047 Application from Prior Art.

Tippmann filed a Reply and Amendment on May 30, 2013, in which it amended claim 11 to include the position of “at least one chiller in the cold storage warehouse space.” Reply and Amendment dated May 30, 2013, ECF No. 112-7, at 4 (emphasis in original indicating amendment). No other claims were amended. Tippmann then presented a series of arguments distinguishing terms shared by “every independent claim” from aspects of Durham and Klysen. Id. at 8.

a. **Warehouse Space**

In its remarks, Tippmann emphasized that each of independent claims 1, 5, 11 (as amended), and 18–19 require chilling or freezing palletized product in a “cold storage warehouse space.” Id. at 7. In distinguishing the independent claims’ “warehouse space” from the cargo containers employed in Durham, Tippmann argued that the term “warehouse” should be given its “plain meaning” so long as that meaning is consistent with the intrinsic record. Id. at 7–8. Citing to an unidentified dictionary, Tippmann argued that “warehouse” means “a large building where raw materials or manufactured goods may be stored prior to their distribution for sale.” Tippmann further asserted that that definition was consistent with “paragraphs [0007]–[0009], claims 5, 15, and 19, and Figures 1–3 of the specification as filed, which illustrate and describe warehouse 2 of an exemplary embodiment of the present invention as a large building sized to store a significant number of palletized products . . . .” Id. at 8 (emphasis added). Thus, according to Tippmann, Durham did not disclose a “warehouse space” because the cargo containers disclosed therein “cannot be considered to be a large building for storing raw materials or manufactured goods” “as called for in every independent claim.” Id. at 8.

**b. Air Flow Direction**

Tippmann next distinguished its application from Durham and Klysen based on air flow direction. Tippmann emphasized that independent claims 1, 5, 18, and 19 call for “freezing air to be drawn into the [air flow] chamber through the [air] intake openings and exhausted into the warehouse space through the air outlet.” *Id.* Likewise, independent claim 11 “calls for a method for quickly freezing palletized product including the steps of: providing an airflow chamber having a plurality of air intake openings and creating a negative air pressure within the air chamber to thereby draw freezing ambient air . . . through the air intake openings to thereby freeze the product.” *Id.* at 8–9. Tippmann emphasized the direction of air flow—that claims 1, 5, and 18–19 require an induced flow arrangement utilizing negative pressure to ‘draw’ air into the airflow chamber” and claim 11 requires “a negative air pressure.” *Id.* Tippmann stressed that, unlike Durham’s “descri[ption of] a positive pressure arrangement” in which air is “pushed” through product, “every independent claim of the present application” required negative pressure. *Id.* Likewise, Tippmann argued that Klysen’s arrangement of its aisle and storage levels could not “create an induced flow arrangement as specified in all of the independent claims of the present application.” *Id.* at 11.

**c. Chiller in the Warehouse Space**

Tippmann further distinguished its application from Durham based on the location of its chiller as recited in independent claims 1, 5, 11, and 18–19. According to Tippmann, claims 1, 5, 18, and 19 require “at least one chiller mounted in the warehouse space” and claim 11 requires “at least one chiller in the cold storage warehouse space.” *Id.* at 9. Tippmann argued that, based on its definition of “warehouse space,” Durham did not disclose such a configuration because Durham’s “air handling unit G” was not “‘in the warehouse space’ as called for in all of Applicant’s independent claims.” *Id.*

**d. “Sealing Engagement”**

Lastly, Tippmann argued that its application was novel and non-obvious over Klysen because Klysen did not disclose (1) “pallet guides . . . frozen in sealing engagement with the air intake openings” as disclosed in claims 1, 5, 18, and 19; nor (2) “an airflow chamber that is substantially sealed” with “a plurality of palletized product stacks against the air intake openings” as disclosed in claim 11. *Id.* at 11.

**3. The Examiner Rejects Tippman’s Arguments and Maintains Prior Rejections.**

The Examiner issued a Final Office Action on August 16, 2013, maintaining his prior § 102 and § 103 rejections based on Durham and Klysen, and indicating that Tippmann’s arguments were “not persuasive.” Final Office Action dated August 16, 2013, ECF No. 112-8, at 2, 10. First addressing Tippmann’s “warehouse” argument, the Examiner presented alternative dictionary definitions of the term that did not require a “large building” as proposed by Tippmann. *Id.* at 10–11. Additionally, the Examiner found that Durham’s cargo container met the description of “warehouse” in Tippmann’s Figures and specification. *Id.* at 11.

Next, the Examiner rejected Tippmann’s attempt to distinguish its application from Durham and Klysen based on an induced air flow (i.e., negative pressure). At that point, “[t]here [was] not a single claim where an induced air arrangement [was] being claimed.” *Id.* at 12; *see id.* at 13–14. Notably, the Examiner characterized Tippmann’s argument as stating that “the references fail to show certain features of applicant’s invention.” *Id.* at 12 (emphasis added). Alternatively, the Examiner found that Durham disclosed “an additional air handler (30) which is creating induce[d] air arrangement in the [warehouse] space.” *Id.* Likewise, the Examiner alternatively found that Klysen disclosed “creation of induced air by right side air handler/blower unit 52.” *Id.* at 14.

The Examiner also rejected Tippmann’s argument distinguishing Durham based on the chiller position within the warehouse, finding that Durham’s additional air handler “G’ ” was located in “an



integral part of the warehousing space to consider to produce the cold air.” Id. at 13. Finally, the Examiner rejected Tippmann’s characterization of Klysen as failing to “disclose or suggest a substantially sealed airflow chamber.” Id. at 14. Citing the use of seals “flex into sealing contact with cargo load/palletized product . . . under the influence of the pressurized air flow to the cool air delivery plenum . . . to prevent escaping the delivery air to the plenum” as disclosed in U.S. Patent 6,012,384 to Badalament et al., the Examiner stated it would have been obvious to implement that feature in Klysen to enhance cooling efficiency. Id. at 14–15. Thus, the Examiner found Tippmann’s “sealing engagement” arguments unavailing.

4. Tippmann Reiterates its Arguments and Amends the Claims to Reflect Distinctions from Prior Art.

Pursuant to its Request for Continued Examination, on February 17, 2014 Tippmann filed an Amendment and Reply to the Examiner’s Final Office Action wherein it amended “for clarity” claims 1, 3–5, 8–11, 13–15, and 18–19. See Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 2–7, 9. Critically, Tippmann amended each independent claim to explicitly claim features that it argued were present in the claims, but that the Examiner declined to read in from the specification. See Final Office Action dated August 16, 2013, ECF No. 112-8, at 12, 14 (induced air arrangement). Tippmann then, in large part, repeated its arguments from its prior Reply and Amendment of May 30, 2013.

First, Tippmann again differentiated its system from Durham based on its construction of “warehouse space.” As amended, independent claims 1, 5, 11, and 18–19 called for a cold storage warehouse space, with an “airflow chamber in the cold storage warehouse space.” Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 9 (emphasis in original indicating amendment). According to Tippmann, because Durham’s system did not include an airflow chamber “in the cold storage warehouse space,” Durham did not anticipate claims 1, 5, 11, and 18–19. Id.

Next, Tippmann restated its “sealing engagement” arguments. Tippmann again distinguished

Durham and Klysen because its claims required palletized product “in sealing engagement” with or “positioned . . . against” the air intake openings of the airflow chamber. Id. at 9–10, 13.

Lastly, Tippmann doubled down on its induced airflow arguments, distinguishing independent claims 1, 5, 11, and 18–19 from Durham and Klysen because the latter systems required positive airflow. Indeed, Tippmann recited in at least five ways Durham’s deficiency as to all independent claims—namely, that it did not disclose negative air pressure as required by all independent claims.<sup>1</sup> Separately, Tippmann twice noted Klysen’s same deficiency.<sup>2</sup> Moreover, Tippmann pointed out that, “while the claims may not use the words ‘induced air,’ the claimed structures produce an induced air arrangement.” Id. at 10–11.

#### 5. The Examiner Allows Tippmann’s Claims As-Amended.

The Examiner issued a Notice of Allowance on February 26, 2014, allowing claims 1–20 as amended in Tippmann’s February 17 filing. See Notice of Allowance dated February 26, 2014, ECF No. 112-10, at 7. In his statement of reasons for allowance, the Examiner simply stated that he “agrees with the reasons presented by the Applicant.” Id.

#### B. Prosecution History of ’570 Patent.

On June 11, 2014, Tippmann filed a continuation application that would eventually become the ’570 Patent. See ’570 Application, ECF No. 112-13. At that point, the ’570 Application was

<sup>1</sup> See Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 10 (“Durham ’452 describes a positive pressure arrangement . . . .”); id. at 11 (“Nowhere does Durham ’452 disclose or suggest the step of creating a negative air pressure within an airflow chamber in the cold storage warehouse space.”); id. (“Durham ’452 does not disclose or suggest a method for quickly freezing palletized products in a cold storage warehouse including the step of creating a negative pressure within an air chamber in the warehouse space but rather describes a positive pressure arrangement . . . .”); id. (“[N]owhere does Durham ’452 indicate that air handling unit 30 is operative to create a negative air pressure within an air chamber in the warehouse space . . . .”); id. (“As argued above with respect to Claim 11, Durham ’452 does not disclose or suggest an arrangement in which an air handler is used to ‘draw’ air into the airflow chamber as specified in independent Claims 1, 5, 18, and 19.”); id. (“Contrary to [the] arrangement [of claims 1, 5, 11, and 18–19,] Durham ’452 describes a positive pressure arrangement . . . .”).

<sup>2</sup> See Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 12 (“[N]owhere does Klysen ’616 indicate that blower units 52 are operative to create a negative air pressure within an air chamber in a warehouse space . . . .”); id. at 12–13 (“Klysen ’616 does not disclose or suggest an arrangement in which an air handler is used to ‘draw’ air into an airflow chamber . . . .”).

identical to the '047 Patent, containing the same specification, ten figures, and twenty claims for a "Rack-Aisle Freezing System for Palletized Product." See id. On February 17, 2015, Tippmann filed a Preliminary Amendment, cancelling former claims 1–20 and replacing them with new claims 21–42. See Preliminary Amendment dated February 17, 2015, ECF No. 112-14, at 2. Tippmann provided no explanation for this amendment, simply requesting that it be entered prior to examination. Id. at 7. Importantly, Tippmann did not express to the Examiner any desire to rescind or withdraw its arguments made during prosecution of the '047 Patent.

Without a single Office Action in the interim, the Examiner issued a Notice of Allowance on November 17, 2015 allowing claims 21–42. See Notice of Allowance dated November 17, 2015, ECF No. 112-15, at 6. In his statement of reasons for allowance, the Examiner stated that

[t]he prior art of record when considered as a whole, alone or in combination, neither anticipates nor render[s] obvious insulation for warehouse pallets of product having a wall disposed between the pallet receiving space and the airflow chamber, the wall having an airflow opening defining an opening periphery, the opening sized and positioned to be sealingly engaged by the pallet assembly when the pallet assembly is pressed against the opening periphery, whereby the air at the desired air temperature can pass into the airflow pathway of the pallet assembly to thereby transfer heat between the product and the air.

Id. Additionally, in its Information Disclosure Statement ("IDS") for the '570 Patent, Tippmann listed the Office Actions and Responses from the '047 Patent's prosecution history. See Pl's Opening Claim Construction Brief, ECF No. 106-4, at 36.

#### IV.

##### A. Impact of Prosecution History of Parent Patent on Continuation Patent.

In Phillips v. AWH Corp., the Federal Circuit instructed that "prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d 1303, 1317 (Fed. Cir. 2005). Likewise, the prosecution history of a parent application may be considered as intrinsic evidence in

the claim construction of the child application unless the relevant argument is expressly rescinded by the applicant. See Hakim v. Cannon Avent Grp., PLC, 479 F.3d 1313 (Fed. Cir. 2007); Golden Bridge Tech., Inc. v. Apple Inc., 758 F.3d 1362, 1366 (Fed. Cir. 2014) (“Although our precedent allows applicants to rescind a disclaimer during prosecution, [Plaintiff] did not avail itself of this route . . .”).

Indeed, “prosecution disclaimer may arise from disavowals made during the prosecution of ancestor patent applications.” Omega Eng’g, Inc., v. Raytek Corp., 334 F.3d 1314, 1333 (Fed. Cir. 2003). Prosecution disclaimer will apply between a parent and child patent when “the same claim limitation is at issue.” Id. But even when the limitation at issue is not identical to that in a familial patent, “statements from prosecution of [the] familial patent relating to the same subject matter as the claim language . . . being construed . . . are relevant.” Ormco Corp. v. Align Tech., Inc., 498 F.3d 1307, 1314 (Fed. Cir. 2007) (emphasis added); see E.I. du Pont De Nemours & Co. v. Unifrax I LLC, 921 F.3d 1060, 1069 (Fed. Cir. 2019) (“When a parent application includes statements involving ‘common subject matter’ with the terms at issue, those statements are relevant to construction of the terms in the child patent.” (citing Wang Lab’ys, Inc. v. Am. Online, Inc., 197 F.3d 1377, 1384 (Fed. Cir. 1999); Jonsson v. Stanley Works, 903 F.2d 812, 818 (Fed. Cir. 1990)); Iridescent Networks, Inc. v. AT&T Mobility, LLC, 933 F.3d 1345, 1350 (Fed. Cir. 2019) (“Statements made during prosecution of a parent application are relevant to construing terms in a patent resulting from a continuation application if such statements relate to the subject matter of the claims being construed.”).

Importantly for this case, the Federal Circuit has also emphasized that “even where ‘prosecution history statements do not rise to the level of unmistakable disavowal, they do inform the claim construction.’” Personalized Media Commc’ns, LLC v. Apple Inc., 952 F.3d 1336, 1340 (Fed. Cir. 2020) (quoting Shire Dev., LLC v. Watson Pharm., Inc., 787 F.3d 1359, 1366 (Fed. Cir. 2015)). Therefore, even if this court finds that the ’047 Patent’s prosecution history does not create

prosecution disclaimer as to the '570 Patent, the '047 Patent's prosecution history remains relevant intrinsic evidence illustrative of the scope of Tippmann's claims.

**B. Impact of Prosecution History of '047 Patent on Claims of '570 Patent.**

The Federal Circuit has recognized that “continuing applications may present broader claims than were allowed in the parent.” Hakim v. Cannon Avent Grp., PLC, 479 F.3d 1313, 1317 (Fed. Cir. 2007). However, an applicant cannot use a continuation application to “recapture claim scope that was surrendered or disclaimed” in the parent application. Id.

**1. Chiller Location**

The prosecution history of the '047 Patent is relevant to the location of the chiller in the '570 Patent and provides support for a construction limiting the chiller location to within the warehouse space. Tippmann emphatically distinguished its application from Durham, asserting that its independent claims require “at least one chiller in the . . . warehouse space.” Reply and Amendment dated May 30, 2013, ECF No. 112-12, at 9. Tippmann argued that Durham did not disclose such a feature based on its proposed definition of “warehouse space,” and that the structure identified by the Examiner as a “warehouse space” did not include an airflow chamber as required by the '047 Application's independent claims. Id. at 9–10. Importantly, Tippmann did not distinguish its application from Durham based on the relationship between the chiller and the airflow chamber. Rather, Tippmann focused on the language of its independent claims, which indicated the chiller must be positioned within the warehouse space. Moreover, as discussed below, the '570 Patent's specification discloses embodiments consistent with Tippmann's prior arguments.

Unlike the independent claims of the '047 Patent, the independent claims of the '570 Patent do not expressly include the air chiller element, despite the clear importance of that element to a freezer system. While it would be clear to a person of ordinary skill in the art that the system needs a

chiller to function,<sup>3</sup> the court will not impose any further location-based restrictions to the meaning of the claims unless supported by the intrinsic evidence.

## 2. Air Flow

The court finds that the prosecution history of the '047 Patent informs and limits the scope of the '570 claims. In order to distinguish the '047 Application from systems in Durham and Klysen disclosing positive pressure arrangements, Tippmann vigorously argued that all of its independent claims required an “induced air arrangement,” *i.e.*, negative air pressure. Moreover, in response to the Examiner pointing out the claims did not include such limitation, Tippmann “clarif[ied]” through amendment the criticality of this feature. And though Tippmann did not refer to “the invention” when making these arguments, it would champion form over substance to find that a limitation present in all independent claims (thus, all dependent claims) is not a feature of “the invention.” Likewise, it is evident that Examiner understood Tippmann’s air flow arguments to be directed to “certain features of the applicant’s invention.” Final Office Action dated August 16, 2013, ECF No. 112-8, at 12 (emphasis). The court finds this sufficient to create an effective disclaimer of positive pressure arrangements.

But even if Tippman’s arguments and characterization of the '047 claims do not give rise to prosecution disclaimer, they nonetheless “inform the claim construction” at hand. Personalized Media Commc’ns, 952 F.3d at 1340 (quoting Shire Dev., LLC v. Watson Pharm., Inc., 787 F.3d 1359, 1366 (Fed. Cir. 2015)). Alloc, Inc. v. Int’l Trade Comm’n, 342 F.3d 1361 (Fed. Cir. 2003), is particularly helpful here. In Alloc, the Federal Circuit reviewed an International Trade Commission’s construction of claim terms in several familial patents<sup>4</sup> related to flooring systems to require “play” despite none of

<sup>3</sup> See '570 Patent at Col. 1, lines 60–61 (“Chillers 8 inside warehouse 2 produce the cold air that flows through aisles 10 and chambers 6.”)

<sup>4</sup> The asserted patents, U.S. Patent Nos. 5,860,267, 6,023,907, and 6,182,410, shared an identical specification and claimed priority to the same PCT application that issued as U.S. Patent No. 5,706,621 (unasserted). See Alloc, 342 F.3d at 1365.

the asserted claims including that term. Alloc, 342 F.3d at 1368. The Federal Circuit noted that the prosecution history of the unasserted parent '621 patent (1) emphasized the importance of “play” for enabling the displacement and disassembly of connected flooring panels, and (2) highlighted this feature to distinguish the application from prior art. Alloc, 342 F.3d at 1371–72. Though the asserted claims of the child patents did not contain the term “play,” the Federal Circuit found it significant that “the critical features of the parent . . . claims are also recited in the claims of its offspring.” Id. at 1372 (identifying the “critical features” as various “means that permit displacement of panels or release of panels during disassembly . . . . Specifically, the asserted [claims] require the displacement of floor panels, or floor panels that are displaceable in relation to each other”). Importantly for the present case, the Federal Circuit looked at the parent patent’s prosecution history alongside the familial patents’ shared specification in deciding to read “play” into the child patents’ claims:

“Moreover, all the figures and embodiments disclosed in the asserted patents imply play, or, as in the case of Figure 1b, expressly disclose play. Indeed, the patents do not show or suggest any systems without play. Thus, the '907 family of patents describe only flooring systems and methods of joining these flooring systems with play between the locking groove and the locking element.”

Alloc, 342 F.3d at 1370. Similarly, here, throughout the prosecution history of the '047 Patent Tippmann hammered down the relationship between the air handler,<sup>5</sup> airflow chamber, air outlet and intake opening, and warehouse space. Specifically, in all independent claims (read: all claims), the configuration of these elements enabled freezing air to be drawn in through the palletized product. See Reply and Amendment dated May 30, 2013, ECF No. 112-7, at 8–9, 11; Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 10–13. As discussed, Tippmann repeatedly distinguished the independent claims of the '047 Application from prior art by stating that the relationship between those elements produced a negative air pressure arrangement. Comparatively, independent claims 1

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<sup>5</sup> Tippmann amended the '047 Application following the Notice of Allowance, striking all instances of the term “air handler” in the claims and replacing it with “fan.” See Preliminary Amendment dated May 2, 2014, ECF No. 112-7, at 7.

and 16 of the '570 Patent claim a relationship between these same essential features: “an airflow chamber including an air inlet and an air outlet; [and] a fan positioned to direct air into the airflow chamber from the air inlet and exhaust air into the warehouse space through the air outlet.” '570 Patent at Col. 4, lines 35–39; *id.* at Col. 6, lines 6–10. As the '570 and '047 Patents share a specification reciting these terms, it is of no doubt that they refer to the same features of the “Rack-Aisle Freezing System for Palletized Product” disclosed therein. Because, as in *Alloc*, (1) “the critical features of the parent . . . claims are also recited in the claims of its offspring,” and (2) the patents’ shared specification only discloses embodiments of negative air pressure systems, the court will read independent claims 1 and 16 of the '570 Patent to require negative air pressure. *Alloc*, 342 F.3d at 1372.

### 3. Sealing Engagement

Where a parent and child patent “share many common terms, we must interpret the claims consistently . . . .” *Samsung Elecs. Co. v. Elm 3DS Innovations, LLC*, 925 F.3d 1373 (Fed. Cir. 2019) (quoting *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1316 (Fed. Cir. 2015)). But even when a familial patent does not share the disputed claim term, that familial patent is relevant intrinsic evidence if both patents claim “common subject matter.” *E.I. du Pont De Nemours & Co.*, 921 F.3d 1060, 1069 (Fed. Cir. 2019) (construing term in patent issued from continuation-in-part application in view of specification of parent patent application where both “claim[ed] inventions” comprised common subject matter and the “statements [in the parent application] relate[d] to common subject matter”); *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1314 (Fed. Cir. 2007) (finding relevant the unasserted parent patent’s prosecution history because it and the asserted child patents shared identical specifications, and thus “the same content”). In *Ormco*, the asserted patents were continuations of an unasserted parent patent; all related to methods and apparatuses for automatically designing and forming custom teeth straightening devices. *Id.* at 1313–16. The Federal Circuit affirmed the district



court's limiting construction of claim terms in the child patents, where the parent patent's prosecution history included statements applicable to all claims that distinguished the application from prior art and the specification included consistent statements. Id. at 1315–16 (“[t]he present invention of applicants . . . .”); id. at 1316 (“Although [the] claim language does not expressly recite automatic control of the finish tooth positioning, that is what they mean, and that is all that the specification describes; the specification does not support operator positioning.”).

Although “sealing engagement” and “sealingly engaged” are not identical terms, they relate to “common subject matter,” namely the relationship between stacks of palletized product and the airflow or air intake openings in the walls of the airflow chamber.<sup>6</sup> Moreover, Tippmann's arguments distinguishing the independent claims of the '047 Application from Durham and Klysen depended upon that relationship. Tippmann repeatedly highlighted the location of its “sealing engagement,” insisting that neither Klysen nor Durham disclosed palletized product stacks “positioned against air intake openings” or “pallets of product in sealing engagement with air intake openings.” Reply and Amendment dated May 30, 2013, ECF No. 112-7, at 11; Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 9–10, 13. Moreover, Tippmann specifically argued that Klysen does not “provide for sealing engagement of pallets of product with the air intake openings as called for in the independent claims of the present application.” Reply and Amendment dated May 30, 2013, ECF No. 112-7, at 12. This statement, like the statement in Ormcq, does not distinguish the '047 Application based on specific claims, but rather based on a requirement of every claim—in other words, a feature

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<sup>6</sup> In the '047 Patent, claims 1, 5, 18, and 19 refer to pallets of “product . . . in sealing engagement with . . . air intake openings.” '047 Patent, Col. 4, lines 42–44; id. at Col. 5, lines 8–10; id. at Col. 6, lines 26–28; id. at Col. 6, lines 53–54. Similarly, claim 11 calls for a “substantially sealed” airflow chamber, with palletized products positioned “against the air intake openings.” Id. at Col. 5, lines 42–46. In the '570 patent, claim 1 requires the “airflow opening defining an opening periphery” to be “sized and positioned to be sealingly engaged by the pallet assembly.” '570 Patent, Col. 4, lines 41–44. Claim 1 defines “pallet assembly” to include “a pallet and a plurality of vertically stacked rows of cases disposed on the pallet.” '570 Patent, Col. 4, lines 31–32.

of the invention. Therefore, the court finds that the prosecution history of the '047 Application is relevant to, and operates to limit, the construction of the related term “sealingly engaged.”

## V.

Tippmann and Innovative have agreed on the construction of two claims terms, “pallet racking assembly” and “chiller.” Pallet racking assembly is construed to mean “a structure with one or more racks for holding pallets with each rack supported in or near each of its four corners.” Joint Claim Construction and Prehearing Statement, ECF No. 104, at 1–2. Chiller is construed to mean “an air cooler or evaporator.” *Id.* at 2.

The parties have identified five groups of disputed terms, totaling twelve individual disputed terms. The court will address these terms in the order they are presented in the Joint Claim Construction and Prehearing Statement.

### A. The Warehouse Terms.

Both Claims 1 and 16 of the '570 Patent claim an installation for warehousing pallets of product, the first element of which is “a warehouse defining a warehouse space set to a desired air temperature.” Tippmann asks the court to construe “warehouse” and “warehouse space,” while Innovative asks the court to break that simple phrase into four convoluted and overlapping definitions.

The term “warehouse” is a common and plainly understood term. The fact that a term may have a commonly understood meaning however

does not relieve the Court of its duty to construe the claims. “A determination that a claim term ‘needs no construction’ or has [a] ‘plain and ordinary meaning’ may be inadequate when a term has more than one ‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1361 (Fed. Cir. 2008), reh’g en banc denied June 11, 2008.

Attic Tent, Inc. v. Copeland, 627 F. Supp. 2d 635, 640 (W.D.N.C. 2008). Thus, the court cannot simply adopt the plain and ordinary meaning of these terms without first resolving the parties' dispute as to the scope of the claims at issue.

The purpose of claim construction is to “determin[e] the meaning and scope of the patent claims asserted to be infringed.” Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir.1995) (en banc), aff'd 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996). When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute. See id. at 979 (holding that claim construction is a matter of law).

O2 Micro, 521 F.3d at 1360.

Tippmann asks the court to construe “warehouse” to mean “a structure or room for the storage of goods,” while Innovative seeks a definition consistent with the drawing in Figure 1 of the '570 Patent which depicts a building containing offices, a loading dock and a large undefined interior space. Innovative asks the court to construe the term “warehouse” as “[a]n entire warehouse complex or building as depicted in Fig. 1 of the '570 Patent, including offices, loading docks/bays, freezer rooms, etc., which also contains the ‘warehouse space.’” The '570 Patent's specification describes Figure 1 as follows: “Fig. 1 is a perspective view of a warehouse incorporating a freezing system in accordance with the present disclosure.” The specification does not mention offices or loading docks, nor do such elements bear on the invention. Rather, the specification states that “[t]he present disclosure relates to a warehouse or structure that mass freezes and stores bulk foods and other products.” '570 Patent, Col. 1, lines 10–11. Further down in column 1, the specification describes the warehouse being “used as a giant freezer that both freezes and maintains perishable foods or like products.” '570 Patent, Col. 1, lines 31–32.

The issue for the court to decide is whether to limit the term warehouse to the configuration depicted in Figure 1, as opposed to how that term is used in the specification. “In those instances where a visual representation can flesh out words, drawings may be used in the same manner and with

the same limitations as the specification.” Autogiro Co. of Am. v. United States, 384 F.2d 391, 398 (Ct. Cl. 1967). However, a “simplified drawing does not outweigh the consistent and unambiguous detailed teachings of the specification.” In re Andersen, 743 F.2d 1578, 1581 (Fed. Cir. 1984) (overruled in part on other grounds by, In re Etter, 756 F.2d 852 (Fed. Cir. 1985)). The specification makes clear how the term warehouse is to be read. It is a structure that stores bulk foods and other products and is not limited by the depiction shown on Figure 1.

Likewise, the term “warehouse space” is self-evident as a space within a warehouse. No additional construction is necessary. Innovative seeks to confine the term “warehouse space” to a one-stage blast freezing system, but the term “warehouse space,” in and of itself, does not lend itself to such a narrow construction.

The larger phrase “a warehouse defining a warehouse space set to a desired air temperature” is awkwardly written, but its meaning is clear from the text of the ’570 Patent and the prosecution history of the ’047 Patent. The specification states “[t]he present disclosure relates to a warehouse or structure that mass freezes and stores bulk foods and other products,” ’570 Patent, Col. 1, lines 10–11, and that “a large warehouse, building, or structure . . . is used as a giant freezer that both freezes and maintains perishable foods or like products.” ’570 Patent, Col. 1, lines 29–32. As such, “a warehouse defining a warehouse space set to a desired air temperature” must be a structure containing a space used as a giant freezer that both freezes and maintains perishable foods or like products.

Innovative argues for a construction that focuses on the location of the evaporator: requiring its direct communication with the warehouse space and prohibiting its direct communication with the airflow chamber. This limited construction is not required. The prosecution history of the ’047 Patent emphasized that the location of the chiller was within the warehouse space but included no argument that would restrict the location to exclude direct communication with the airflow chamber.

Moreover, claims 1 and 16 do not expressly include the chiller, and it is clear from the specification that the chiller “can be positioned in different locations as needed inside warehouse 2.” ’570 Patent at Col. 1, lines 61–63. For example, in an embodiment shown in Figure 2, “chillers 8 are positioned remotely from chambers 6. The chilled air passes through open spaces near or through cases of product in order to enter chamber 6.” *Id.* at Col. 1, lines 63–66. Viewed together, the ’047 Patent’s prosecution history and the ’570 Patent’s specification indicate only that the chiller must be within the warehouse space. To the extent that Innovative’s construction further limits the position of the chiller, it is without support from the specification and prosecution history. As such, the court construes “a warehouse defining a warehouse space set to a desired temperature” to mean “a structure containing a space used as a giant freezer that contains a chiller and both freezes and maintains perishable foods or like products.”

All considered, the construction rendered by the court both mirrors the language in the specification at column 1, lines 31–32 and lines 60–66, and is consistent with the disclosure in claims 1 and 16.

#### B. The Airflow Chamber Terms.

Claims 1 and 16 of the ’570 Patent contain two terms, “airflow chamber” and “an air inlet and an air outlet.” Tippman argues that each of these terms are facially clear and unambiguous and do not need construction. Innovative asks that “airflow chamber” be construed as “air plenum,” and that “an air intake and an air outlet” be construed as, “Air intake(s) positioned along the wall of the air chamber/plenum from which air is exhausted from the plenum back into the warehouse space.”

According to Oxford English Dictionary, a “chamber” is “a room and related senses,” and a “plenum” is “a space completely filled with matter.” Both experts agree that the terms “airflow chamber” and “air plenum” are synonymous to those skilled in the art. Indeed, Innovative’s proposed

construction of “an air inlet and air outlet” uses the term “air chamber/plenum.” As such, those terms may be used interchangeably.

The parties disagree as well on the term “an air inlet and an air outlet.” Tippman argues that the terms are facially clear and unambiguous such that additional construction is unnecessary, while Innovative seeks a construction consistent with the embodiment reflected in the patent specification and the airflow directional arrows found on Figures 2, 4, 6 and 10 of the '570 Patent. Innovative argues that the claims of the '570 Patent, as detailed in the specification, call for air intake into the air chamber through the vertical wall adjacent to the pallets and air exit through an outlet at the top of the vertical air chamber. Plainly, Innovative's construction closely tracks the specification and embodiment disclosed in the '570 Patent. Likewise, as discussed above, the '047 Patent's prosecution history in conjunction with the patents' shared specification “inform[s] the claim construction.” Personalized Media Commc'ns, 952 F.3d at 1340 (quoting Shire Dev., LLC v. Watson Pharm., Inc., 787 F.3d 1359, 1366 (Fed. Cir. 2015)). Since the “critical features” of the '047 Patent's claims “are also recited in the claims of its offspring,” and all embodiments in the patents' shared specification disclose negative air pressure systems, the court will construe “an air inlet and an air outlet” to have locations that effectuate such a system.<sup>7</sup> Alloc, 342 F.3d at 1372. Accordingly, “an air inlet and an air outlet” means “air intake(s) positioned along the wall of the air chamber that correspond to each pallet position, and an air outlet positioned at the top of the chamber from which air is exhausted from the chamber back into the warehouse space.”<sup>8</sup>

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<sup>7</sup> The court declined to impose a location-limiting construction for the term “a warehouse defining a warehouse space set to a desired temperature” that exceeded the requirements for the claim. Here, the court does the same: because Tippmann's system requires negative air pressure, it will construe the elements of that system accordingly.

<sup>8</sup> Although dependent claims 5–7 and 17–18 disclose such configurations, the court is unconvinced that claim differentiation aids Tippmann here. As noted by the Federal Circuit, “claim differentiation only creates a presumption that each claim in a patent has a different scope; it is ‘not a hard and fast rule of construction.’” Kraft Foods, Inc. v. Int'l Trading Co., 203 F.3d 1362, 1368 (Fed. Cir. 2000) (quoting Comark Commc'ns, Inc. v. Harris Corp., 156 F.3d 1182 (Fed. Cir. 1998)). Indeed, “claim differentiation can not broaden claims beyond their correct scope.” Multiform Desiccants Inc. v. Medzam, Ltd., 133 F.3d 1473, 1480 (Fed.Cir.1998) (finding that the specification did not support limitation in dependent claim).

C. The Fan Terms.

Claims 1 and 16 contain the words “a fan positioned to direct air into the airflow chamber from the air inlet and exhaust air into the warehouse space through the air outlet.” The court finds the term “fan” not to require construction.

The parties disagree on the term “positioned to direct air into the airflow chamber from the air inlet and exhaust air into the warehouse space through the air outlet.” Tippman argues that the terms are facially clear and unambiguous such that additional construction is unnecessary, while Innovative seeks a construction consistent with the '047 Patent's prosecution history, the embodiment reflected in the '570 Patent specification, and the airflow directional arrows found on Figures 2, 4, 6 and 10 of the '570 Patent. Innovative argues that the position of the “fan” must be in a location to create a negative pressure system. Plainly, Innovative's construction closely tracks the specification and embodiment disclosed in the '570 Patent. Likewise, Innovative's construction is required by the prosecution history of the '047 Patent, during which Tippmann repeatedly distinguished all independent claims (*i.e.*, all claims, “the invention”) from prior art because the disclosed configuration of the airflow chamber, airtake inlet and outlet, and warehouse space created a negative air pressure.

Just as Alloc guided the court to limit the '570 Patent claims to require an induced airflow arrangement based on the shared “critical features” with the claims of the '047 Patent, Alloc provides additional clarity regarding the weight of the embodiments disclosed in the '570 Patent specification and figures. Namely, the Federal Circuit doubled down on its reading of “play” into the child patent claims because the patents' shared specification did “not show or suggest any systems without play.” Alloc, 342 F.3d 1361, 1370 (Fed. Cir. 2003).

Like the '907 patent family in Alloc, all figures and embodiments disclosed in the '047 and '570 Patents' shared specification either imply an induced air arrangement or expressly disclose an induced air arrangement. *See, e.g.*, '570 Patent, Figs. 2, 4, 6, 10; *id.* at Col. 1, lines 48–51; *id.* at Col. 1,

lines 56–59; *id.* at Col. 1, line 66 through Col. 2 line 2; *id.* at Col. 2, lines 29–32. Likewise, the shared abstract states that, “Pallets on pallet guides are pressed against the intake openings such that freezing air is drawn through the palletized product to thereby quickly freeze the product.” (emphasis added).

“While limitations contained in the specification are not ordinarily read into the claims,” Watts v. XL Systems, Inc., 232 F.3d 877, 882 (Fed. Cir. 2000), case law teaches that “[c]laims must be read in view of the specification, of which they are a part.” Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995); see Vitronics Corp. v. Conceptoronic, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“Usually, [the specification] is dispositive; it is the single best guide to the meaning of a disputed term.”); see also 35 U.S.C. § 112(a), (b) (stating one must look to the specification and claims to determine what the inventor regards as his invention). Indeed,

the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice. See Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186–87 (Fed. Cir. 1998) (“[T]here is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification.”). However, the line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.

Phillips v. AWH Corp., 415 F.3d 1303, 1323 (Fed. Cir. 2005). “A specification’s emphasis on a particular feature of an invention in solving the problems of the prior art is an important factor in defining the claims.” Transcend Med., Inc. v. Glaukos Corp., No. CV 13-830, 2015 WL 263612, at \*6 (D. Del. Jan. 16, 2015).

Tippmann insists that the specification makes clear that this negative pressure design is but an “illustrative embodiment” of the invention. See ’570 Patent, Co. 1, line 46.

Whether an invention is fairly claimed more broadly than the “preferred embodiment” in the specification is a question specific to the content of the specification, the context in which the embodiment is described, the prosecution history, and if appropriate the prior art, for claims should be construed, when feasible, to sustain their validity. The usage “preferred” does not of itself broaden the claims beyond their support in the specification. See Modine Mfg. Co. v. United States Int’l Trade Comm’n, 75 F.3d



1545, 1551 (Fed. Cir. 1996)]; General American Transportation Corp. v. Cryo-Trans, Inc., 93 F.3d 766, 770, 772, 39 USPQ2d 1801, 1803, 1805-06 (Fed. Cir. 1996) (the teaching in the specification was “not just the preferred embodiment of the invention; it is the only one described”).

Wang Labs., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1383 (Fed. Cir. 1999). To be sure, the claims of the '570 Patent do not include language found in the claims of the '047 Patent claiming a negative pressure system in which freezing air from the warehouse space is drawn through the palletized product into the air chamber to thereby quickly freeze the product. But no other embodiment or design is ever taught, illustrated or suggested. “Although claims need not be limited to the preferred embodiment when the invention is more broadly described, ‘neither do the claims enlarge what is patented beyond what the inventor has described as the invention.’” Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc., 450 F.3d 1350, 1355 (Fed. Cir. 2006) (quoting Netword, LLC v. Central Corp., 242 F.3d 1347, 1352 (Fed. Cir. 2001)).

Therefore, the court will construe the term “positioned to direct air into the airflow chamber from the air inlet and exhaust air into the warehouse space through the air outlet” to mean that “the fan is positioned to create a negative pressure in the chamber that pulls air from the air inlets/intakes and pushes the air through the air outlet at the top of the chamber.”

#### D. The Sealingly Engaged Terms.

Claims 1, 10, and 22 contain the phrase “sized and positioned to be sealingly engaged.” See '570 Patent. Likewise, claim 16 contains the phrase “sized to be sealingly engaged.” See '570 Patent. Lastly, claim 2 contains the words “sealingly engaged.” See '570 Patent. Tippmann argues that these phrases need separate construction, based on the context in which the term “sealingly engaged” is used within the three claim groups. See Joint Claim Construction and Prehearing Statement, ECF No. 104, at 12–14. Innovative, on the other hand, proposes an identical construction for each term. See Joint Claim Construction and Prehearing Statement, ECF No. 104, at 12–14. The court will first address “sealingly engaged,” as this term contributes to the bulk of the parties’ disagreement.

Tippmann construes “sealingly engaged” to mean “placed sufficiently adjacent to channel air at the desired air temperature into the airflow pathway(s) of the pallet assembly.” Joint Claim Construction and Prehearing Statement, ECF No. 104, at 12. Innovative proposes the meaning: “A pallet is pressed against the opening periphery in the wall to create a seal.” Id.

The core rationale of Tippmann’s proposed constructions lies in its interpretation of the intrinsic evidence not to require a “hermetic” seal, but rather “non-perfect sealing,” except where a seal is claimed in unasserted claim 13. Tippmann relies on claim differentiation and the specification to make this argument, stating that the specification “repeatedly describes non-perfect sealing in its illustrative embodiment.” Markman Hr’g Tr., ECF No. 131, at 25. “When the specification is describing its illustrative embodiment, it repeatedly describes scenarios that do not involve a perfect hermetic seal.” Markman Hr’g Tr., ECF No. 131, at 28. The court agrees with Tippmann that the specification is relevant here, insofar as that “a claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.” On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH, 386 F.3d 1133, 1138 (Fed. Cir. 2004) (internal quotations omitted). Thus, the court will not construe “sealingly engaged” to require a perfect, hermetic seal.

However, Tippmann’s construction nonetheless is flawed because it departs from the plain and ordinary meaning of the term and contradicts the express language of claim 1. Likewise, Tippmann’s construction is foreclosed by the limited prosecution history of the ’570 Patent in conjunction with its statements in the prosecution history of the ’047 Application.

With respect to the plain and ordinary meaning of “sealingly engaged,” the court will focus on the term “engaged,” which Tippmann emphasized “is really the more important term [in the phrase], because engaged is getting to the purpose of the patent, which is to transfer heat as quickly as possible and as efficiently as possible out of this product.” Markman Hr’g Tr., ECF No. 131, at 25. But despite the criticality of that term, Tippmann chose to replace it with “adjacent” and step away from its plain

and ordinary meaning. Tippmann’s cited dictionaries—The New Lexicon Webster’s Dictionary of the English Language and Webster’s Ninth New Collegiate Dictionary—define “adjacent” as “near, nearby” and “not distant: nearby.” Pl.’s Opening Claim Construction Br. Ex. F, ECF No. 105-F, at 5; Pl.’s Opening Claim Construction Br. Ex. G, ECF No. 105-G, at 4. By contrast, the Oxford American Dictionary, also cited by Tippman, defines “engage” to mean “move into position so as to come into operation.” Pl.’s Opening Claim Construction Br. Ex. E, ECF No. 105-E, at 8.

Importantly, this definition of “engage” tracks the language of claim 1, wherein the opening is “sized and positioned to be sealingly engaged by the pallet assembly when the pallet assembly is pressed against the opening periphery.” ’570 Patent, Col. 4, lines 42–45 (emphasis added). As the Federal Circuit stated in Phillips, “the claims themselves provide substantial guidance as to the meaning of particular claim terms.” Phillips, 415 F.3d at 1314. The claim itself states that the pallet assembly is “sealingly engaged” when it is “pressed against the opening periphery.” It is highly doubtful that a person of ordinary skill in the art would read “pressed against” and interpret that to mean “placed sufficiently adjacent” (i.e., placed “sufficiently nearby”). As Tippmann’s “sufficiently adjacent” construction plainly contradicts the language of claim 1—which, as an independent claim, carries over to each use of “sealingly engaged” in dependent claims 2–15—it is rejected by the court.<sup>9</sup> Moreover, “[b]ecause claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” Phillips, 415 F.3d at 1314. Thus, the court will read “sealingly engaged” to have a consistent meaning across claim 1 and claim 16.

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<sup>9</sup> Moreover, Oxford’s definition of “engage” tracks the meaning of “sealing engagement” previously used by Tippmann to distinguish the ’047 Application from Durham and Klysen—namely, that the ’047 Application required palletized product “positioned . . . against” the air intake openings of the airflow chamber. See Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 9–10, 13.

Moreover, the prosecution history of the '570 Patent, in tandem with Tippmann's statements in the prosecution history of the '047 Patent, provides important insight into the scope of the claims which the Examiner deemed allowable. In his Statement of Reasons for Allowance, the Examiner stated that:

[t]he prior art of record when considered as a whole, alone or in combination, neither anticipates nor render[s] obvious insulation for warehouse pallets of product having a wall disposed between the pallet receiving space and the airflow chamber, the wall having an airflow opening defining an opening periphery, the opening sized and positioned to be sealingly engaged by the pallet assembly when the pallet assembly is pressed against the opening periphery.

Notice of Allowance dated November 17, 2015, ECF No. 112-15, at 2 (emphasis added). Though not obligated to, Tippmann did not submit to the PTO any "Comments on Statement for Reasons of Allowance" in response to the Examiner's statements. And while the Federal Circuit has held that an applicant's lack of response to an Examiner's Statements of Reasons for Allowance "will not necessarily limit a claim," "it does not necessarily follow that such statements are not pertinent to construing claim terms." ACCO Brands, Inc. v. Micro Sec. Devices, Inc., 346 F.3d 1075, 1079 (Fed. Cir. 2003); Salazar v. Procter & Gamble Co., 414 F.3d 1342, 1347 (Fed. Cir. 2005) (holding limitedly that the Examiner's statements did not create a "clear disavowal of claim scope" as determined by the district court, but highlighting that "[s]tatements about a claim term made by an examiner during prosecution of an application may be evidence of how one of skill in the art understood the term at the time the application was filed").

For example, in Sandbox Logistics, the Federal Circuit upheld the district court's construction of the term "bottom" in a family of patents related to systems for using proppant at a well site to mean "bottom wall." SandBox Logistics LLC v. Proppant Express Invs. LLC, 813 F. App'x 548, 555 (Fed. Cir. 2020). In so holding, the Federal Circuit relied on the prosecution history of the parent patent, including the Examiner's Statement of Reasons for Allowance, in which the Examiner distinguished the application from prior art which "fail[ed] to teach or suggest . . . a bottom[ ] and a

hatch closely adjacent to the bottom.” *Id.* at 554. Considering statements by Examiner and Applicant that signaled the importance of the bottom wall to Applicant’s claims, “SandBox’s failure to challenge the Examiner’s understanding amount[ed] to a disclaimer.” *Id.*; *see id.* (“As the Examiner explained, he “considered [the bottom wall] essential because the specification does not describe a means to connect the hatch to the container without the bottom wall.”).

Here, in order to distinguish its claims from Klysen and Durham, Tippmann stressed repeatedly during the prosecution of the ’047 Application that its independent claims required palletized product stacks “positioned against air intake openings” or “pallets of product in sealing engagement with air intake openings.” Reply and Amendment dated May 30, 2013, ECF No. 112-7, at 11; Reply and Amendment dated February 17, 2014, ECF No. 112-9, at 9–10, 13. Based on these characterizations of the parent application, which Tippmann referenced in the ’570 Application by including filings in the prosecution history of the ’047 Application in its IDS,<sup>10</sup> the Examiner concluded that the ’570 Application required “the opening [to be] sized and positioned to be sealingly engaged by the pallet assembly when the pallet assembly is pressed against the opening periphery.” The court concludes from its review that a person of ordinary skill in the art would understand that the pallet assembly must be pressed against the opening periphery to facilitate flow of the air into the airflow pathway of the pallet assembly.

The court finds it unnecessarily complicated to perform Tippmann’s treble construction when the meaning of “sealingly engaged” can be read into each phrase in which the term is used. Thus, for the foregoing reasons, the court will construe “sealingly engaged,” as used in each asserted claim, to mean that “the pallets within the pallet assembly are pressed against the opening periphery to substantially seal the opening periphery and the airflow pathway of the pallet assembly.” This

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<sup>10</sup> “An IDS is part of the prosecution history on which the examiner, the courts, and the public are entitled to rely.” *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1303 (Fed. Cir. 1997).

construction rendered by the court reflects (1) the meaning of “sealingly engaged” as informed by the language of claim 1; (2) the language of the specification; and (3) the prosecution histories of the ’047 and ’570 patents.

E. The Wall Term.

Claims 1 and 16 contain the word “wall,” which is a commonly understood term needing no construction by the court to understand its plain meaning.

VI.

For the foregoing reasons, the court rules as follows:

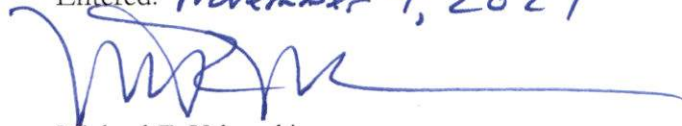
1. The term “warehouse” means a structure that stores bulk foods and other products and is not limited by the depiction shown on Figure 1.
2. The term “warehouse space” means a space within a warehouse.
3. The terms “a warehouse defining a warehouse space set to a desired air temperature” means “a structure containing a space used as a giant freezer that contains a chiller and both freezes and maintains perishable foods or like products.”
4. The term “airflow chamber” is synonymous with air plenum and will be given its plain and ordinary meaning.
5. The term “an air inlet and an air outlet” means “air intake(s) positioned along the wall of the air chamber that correspond to each pallet position, and an air outlet positioned at the top of the chamber from which air is exhausted from the chamber back into the warehouse space.”
6. The term “fan” will be given its plain and ordinary meaning.
7. The term “a fan positioned to direct the air into the airflow chamber from the air inlet and exhaust air into the warehouse space through the air outlet” means “the fan is positioned to create a negative pressure in the chamber that pulls air from the air inlets/intakes and pushes the air through the air outlet at the top of the chamber.”

8. The term “sealingly engaged” means “the pallets within the pallet assembly are pressed against the opening periphery to substantially seal the opening periphery and the airflow pathway of the pallet assembly.”

9. The term “wall” will be given its plain and ordinary meaning.

An appropriate Order will be entered.

Entered: *November 9, 2021*

A handwritten signature in blue ink, appearing to read 'M. Urbanski', with a long horizontal line extending to the right.

Michael F. Urbanski  
Chief United States District Judge